

$^{69}\text{Ga}(\alpha, n\gamma)$ 1999So09

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni		NDS 111,1 (2010)	1-May-2009

E=14.2 MeV. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$, ce. Similar study by the same group using the (p,n γ) reaction is at (p,n γ): Set 2 dataset.

 ^{72}As Levels

E(level) [†]	J $^{\pi}$	E(level) [†]	J $^{\pi}$	E(level) [†]	J $^{\pi}$	E(level) [†]	J $^{\pi}$
0.0	2 ⁻	525.4	3 ⁻	801.4	(4) ⁺	1178.8	(7) ⁺
45.9	1 ⁺	558.8	4 ⁻	827.8	6 ⁺	1190.6	4 ⁺ ,5 ⁺
213.9	3 ⁺	562.7	7 ⁻	833.7	6 ⁻	1345.7	(7) ⁻
309.7	4 ⁻	593.4	4 ⁻	839.9	(3 to 5) ⁻	1400.7	9 ⁺
317.9	4 ⁺	662.7	6 ⁻	866.6	4 ⁻		
362.7	5 ⁻	707.7	5 ⁻	980.7	8 ⁺		
414.3	3 ⁻	744.6	4 ⁻ ,5 ⁻	1033.0	(5) ⁺		

[†] From least-squares fit to $E\gamma$ assuming $\Delta E\gamma=1$ keV.

 $\gamma(^{72}\text{As})$

E_{γ}	$E_i(\text{level})$	J $^{\pi}_i$	E_f	J $^{\pi}_f$	Mult. [†]	E_{γ}	$E_i(\text{level})$	J $^{\pi}_i$	E_f	J $^{\pi}_f$	Mult. [†]
46	45.9	1 ⁺	0.0	2 ⁻		300	662.7	6 ⁻	362.7	5 ⁻	M1+E2
53	362.7	5 ⁻	309.7	4 ⁻		310	309.7	4 ⁻	0.0	2 ⁻	E2
96	309.7	4 ⁻	213.9	3 ⁺	D	318	980.7	8 ⁺	662.7	6 ⁻	M2
104	317.9	4 ⁺	213.9	3 ⁺	M1,(E1)	345	707.7	5 ⁻	362.7	5 ⁻	M1
120	827.8	6 ⁺	707.7	5 ⁻		351	1178.8	(7) ⁺	827.8	6 ⁺	M1
126	833.7	6 ⁻	707.7	5 ⁻		363	1190.6	4 ⁺ ,5 ⁺	827.8	6 ⁺	
145	558.8	4 ⁻	414.3	3 ⁻		382	744.6	4 ⁻ ,5 ⁻	362.7	5 ⁻	M1
151	744.6	4 ⁻ ,5 ⁻	593.4	4 ⁻		387	801.4	(4) ⁺	414.3	3 ⁻	E1
153	980.7	8 ⁺	827.8	6 ⁺	E2	389	1190.6	4 ⁺ ,5 ⁺	801.4	(4) ⁺	M1+E2
159	866.6	4 ⁻	707.7	5 ⁻		398	707.7	5 ⁻	309.7	4 ⁻	
165	827.8	6 ⁺	662.7	6 ⁻		414	414.3	3 ⁻	0.0	2 ⁻	M1
168	213.9	3 ⁺	45.9	1 ⁺	E2	418	980.7	8 ⁺	562.7	7 ⁻	E1
171	833.7	6 ⁻	662.7	6 ⁻		420	1400.7	9 ⁺	980.7	8 ⁺	M1
179	593.4	4 ⁻	414.3	3 ⁻		452	866.6	4 ⁻	414.3	3 ⁻	M1
196	558.8	4 ⁻	362.7	5 ⁻		465	827.8	6 ⁺	362.7	5 ⁻	E1
198	1178.8	(7) ⁺	980.7	8 ⁺		471	833.7	6 ⁻	362.7	5 ⁻	M1
200	562.7	7 ⁻	362.7	5 ⁻	E2	477	839.9	(3 to 5) ⁻	362.7	5 ⁻	
205	1033.0	(5) ⁺	827.8	6 ⁺	M1+E2	504	866.6	4 ⁻	362.7	5 ⁻	M1
214	213.9	3 ⁺	0.0	2 ⁻	E1	510 [‡]	827.8	6 ⁺	317.9	4 ⁺	
216	525.4	3 ⁻	309.7	4 ⁻		512	1345.7	(7) ⁻	833.7	6 ⁻	
231	593.4	4 ⁻	362.7	5 ⁻	M1	522	839.9	(3 to 5) ⁻	317.9	4 ⁺	
232	1033.0	(5) ⁺	801.4	(4) ⁺	M1	525	525.4	3 ⁻	0.0	2 ⁻	M1
243	801.4	(4) ⁺	558.8	4 ⁻	E1	530	839.9	(3 to 5) ⁻	309.7	4 ⁻	M1
247	839.9	(3 to 5) ⁻	593.4	4 ⁻	M1	557	866.6	4 ⁻	309.7	4 ⁻	
265	827.8	6 ⁺	562.7	7 ⁻	E1	559	558.8	4 ⁻	0.0	2 ⁻	E2
271	833.7	6 ⁻	562.7	7 ⁻	M1	683	1345.7	(7) ⁻	662.7	6 ⁻	
276	801.4	(4) ⁺	525.4	3 ⁻		715	1033.0	(5) ⁺	317.9	4 ⁺	
284	593.4	4 ⁻	309.7	4 ⁻	M1	783	1345.7	(7) ⁻	562.7	7 ⁻	M1(+E2)

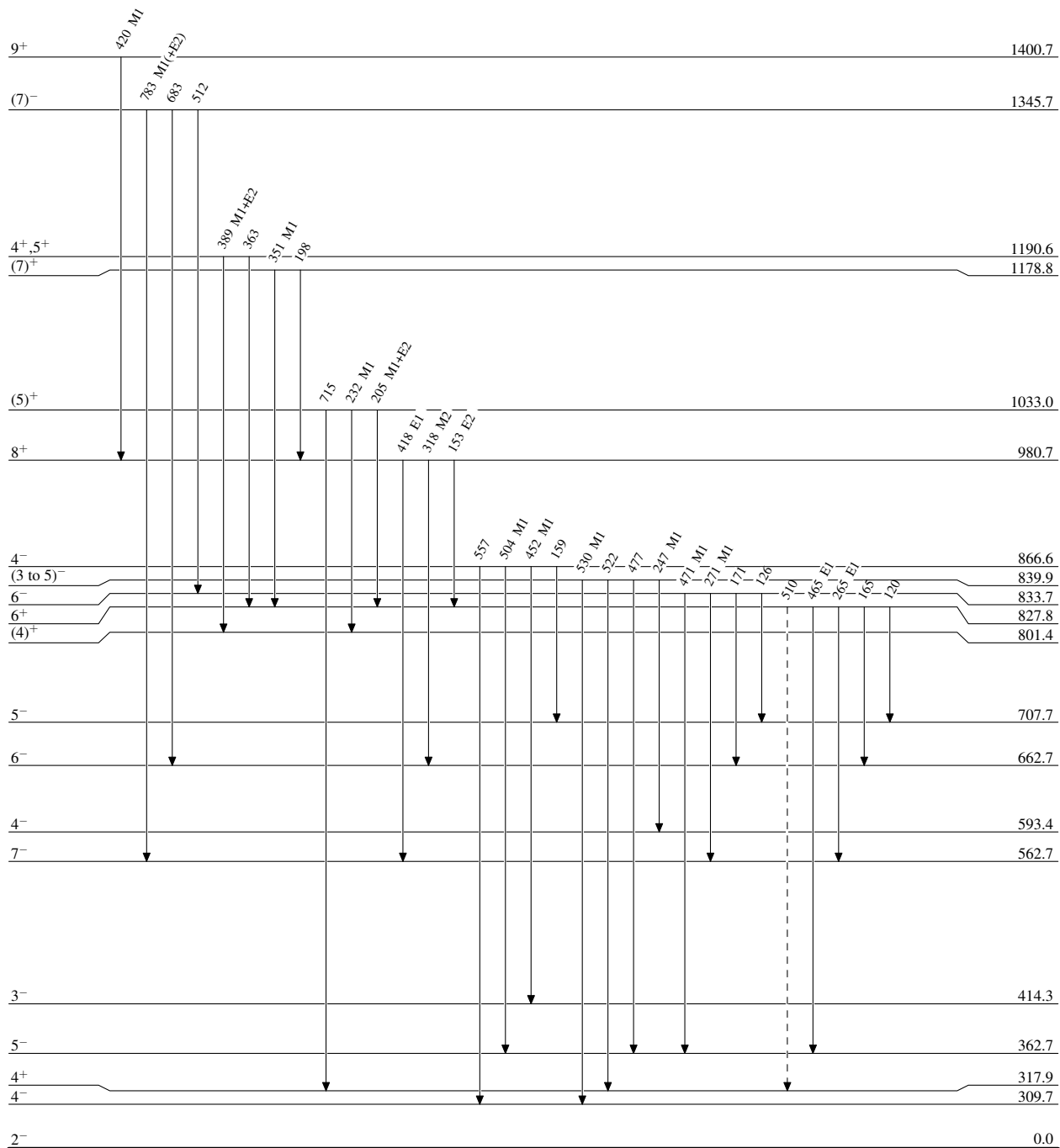
[†] From $\alpha(\text{K})\text{exp}$.

[‡] Placement of transition in the level scheme is uncertain.

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Legend

Level Scheme

-----► γ Decay (Uncertain) $^{72}_{33}\text{As}_{39}$

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Level Scheme (continued)

